

Title (en)

Converter with voltage limiting component

Title (de)

Umrichter mit spannungsbegrenzendem Bauteil

Title (fr)

Convertisseur avec composant pour limitation de la voltage

Publication

EP 2320545 B1 20180926 (EN)

Application

EP 10166956 A 20100623

Priority

FI 20095852 A 20090818

Abstract (en)

[origin: US2011044080A1] A converter includes a converter bridge (101) adapted to transfer electrical energy between the AC terminal (102) and the DC terminal (103) of the converter. The converter also includes electrical paths bypassing the converter bridge for conducting overvoltage transients occurring in the AC terminal around the converter bridge to the DC terminal. Each electrical path includes a unidirectionally conductive semiconductor component (104a, 104b, 104c), such as a diode, and a voltage-limiting component (105) for which the ratio of voltage change to current change is small when the voltage of the voltage-limiting component is greater than a predetermined threshold voltage. Because of the overvoltage protection thus achieved, AC chokes can be omitted from the AC terminal or at least they can be designed smaller, reducing the load-dependent voltage drop of the DC terminal.

IPC 8 full level

H02M 1/32 (2007.01); **H02H 7/122** (2006.01)

CPC (source: EP FI US)

H02H 9/046 (2013.01 - FI); **H02M 1/32** (2013.01 - EP FI US); **H02M 1/0085** (2021.05 - EP)

Citation (examination)

EP 1715567 A2 20061025 - VACON OYJ [FI]

Cited by

CN107528480A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

US 2011044080 A1 20110224; **US 8670253 B2 20140311**; EP 2320545 A1 20110511; EP 2320545 B1 20180926; FI 122449 B 20120131; FI 20095852 A0 20090818; FI 20095852 A 20110219

DOCDB simple family (application)

US 83768210 A 20100716; EP 10166956 A 20100623; FI 20095852 A 20090818